Appendix O.

Summary of Comments on the Draft Recovery Plan

On June 6, 2001, the USFWS published in the Federal Register (66 FR 30477) an announcement of the availability of the draft Southwestern Willow Flycatcher Recovery Plan, and opened a 120-day comment period. The comment period was subsequently reopened for a period of 60 days extending through December 10, 2001 (66 FR 51683). More than 500 copies of the Recovery Plan were directly distributed to Federal and State agencies, private interests, and Congressional members in New Mexico, Arizona, California, Utah, Colorado, Nevada, and Texas, as well as more than 200 Implementation Subgroup members. The draft Recovery Plan was also available on a USFWS Southwest Region website.

Responses to 87 significant issues identified in comments received by the USFWS are included in this appendix. The USFWS appreciates the interest expressed and the information shared by the commenting parties; many comments led to changes in the draft Recovery Plan. The USFWS hopes that the final Recovery Plan reflects the high degree of collaboration and cooperation that has shaped this planning effort over the last five years.

Issue #1

Comment: The Services policy states a recovery plan delineates, justifies, and schedules the research and management actions necessary to support recovery of the species. Much of the rationale in the draft Recovery Plan fails to show a clear relationship between the task and flycatcher recovery. Some tasks are derived from appendices that acknowledge that many recommended actions may not be appropriate for all situations, but this is not adequately reflected in the Recovery Plan portion of the draft Plan, where tasks are described as universal goals.

Response: The Recovery Plan has been revised in response to this comment.

The approach of the "issue papers" provided in the Plan's appendices is described on pages 2 and 3 of the Introduction. The appendices provide a broad background of information, full analysis of the threat or management issues, and in some cases, specific justification for the recovery strategy/action used in the body of the Plan. In some cases, an appendix contains information that is useful for understanding the context of a threat to flycatcher recovery, but may not be directly applicable to management recommendations.

The Plan has been revised to bring forward important information from the appendices into the Recovery Plan in order to describe the rationale for specific recovery actions/tasks. A summary of the nine categories of Recovery Actions is provided in the Executive Summary (page vi). The details of the Recovery Actions are presented in the Stepdown Outline of Recovery Actions (Section IV.D.) and Narrative Outline for Recovery Actions Chapter IV Recovery (Section IV.E.). These two sections have been revised in response to this comment to include better descriptions, examples, and more specific information. Also, Section IV.F., "Minimization of Threats to the Southwestern Willow Flycatcher Through Implementation of Recovery Actions", has been added to specifically associate recovery actions with the factors which led to the flycatcher being listed.

Issue #2

Comment: In order to use the best scientific and commercial data available, consider reports completed by Jones and Stokes in 2000 and 2001 on operation of Isabella Dam along the Kern River in California before completing the final Recovery Plan.

Response: The Plan has been revised in response to this comment.

The reports on the operation of Isabella Dam completed by Jones and Stokes have been reviewed by the Technical Team and included in the list of literature used to formulate the final Recovery Plan.

Issue #3

Comment: The draft Plan has only briefly addressed the introduction of biological control for salt cedar.

Response: Yes, while biological control of salt cedar is only briefly addressed in the Recovery Plan, strategies for management of exotic plant species are provided in detail. Biological control of saltcedar is addressed in Appendix H, "Exotic Plant Species in Riparian Ecosystems of the U.S. Southwest" (page H-17). Appendix H explains that biological control is a complex form of management that is being tested as a method to reduce tamarisk (saltcedar). Widespread biological control is not recommended due to the potential for unfavorable results as described in Appendix H, page H-17, and the Recovery Plan provides recovery actions in the Sections IV.D. and IV.E. for the management of exotic plant species (recovery action 1.1.3.2.). The Recovery Plan specifies that biological control be considered on a site-specific basis only if significant information on impacts is known and if it can be factored into an overall management scheme that addresses underlying reasons for the decline of riparian vegetation. Future revisions to the Recovery Plan will reflect new findings concerning this type of management.

Issue #4

Comment: The Implementation Schedule in the draft Plan does not adequately reflect costs for any changes in water or livestock management, or other recovery actions such as development of habitat for delisting, sediment augmentation, modification of dam rules, etc., nor does it provide any description for how costs were derived.

Response: See revised Implementation Schedule, Section V., page 144.

Issue #5

Comment: The manner displaying costs in the Implementation Schedule is inconsistent with requirements of the ESA which requires recovery plans to show the costs of recovery. The implementation schedule needs to be expanded to show the full cost of recovery through 2030.

Response: See revised Implementation Schedule, Section V., page 144.

Issue #6

Comment: Establish a single target parasitism percentage for when cowbird trapping should be initiated, rather than a range (20 to 30%). A range of percentages makes it more difficult for managers to make a decision on when to trap and regulatory agencies to remain consistent. We realize that there will always be exceptions to every target number, but those should be dealt with in the text, not by giving managers a range of numbers.

Response: The Recovery Plan has been revised in response to this comment. In Sections IV.D. and IV.E., Stepdown and Narrative Outline item 3.1.1.3. has been changed to provide additional clarity. Also, new text has been added to Appendix F, "Cowbird Management and the Southwestern Willow Flycatcher: Impacts and Recommendations for Management", which provides justification for maintaining a range. The USFWS emphasizes that recommendations in a Recovery Plan that provide the roadmap for recovery of an entire subspecies may differ from the determination that a project may adversely affect a breeding pair of flycatchers, or the need to reduce and minimize effects associated with a project evaluated under the Endangered Species Act.

Issue #7

Comment: Because cowbird parasitism has inhibited the reproductive success of the flycatcher, reduced

population levels, and contributed to the endangerment of the species, the statement that cowbird parasitism does not necessarily have critical or even significant effects on a given flycatcher population appears to be contradictory. In any case, recently reported cowbird parasitism rates ranging up to 66 percent at several important nesting locales suggest significant, if not critical, parasitism impacts at those locales.

Response: There is no contradiction here. Cowbird parasitism has contributed to the endangerment of the flycatcher and caused adverse effects to individual breeding attempts, but depending on a variety of factors, the presence of cowbird parasitism may not always have an effect on local flycatcher populations(see Section II., page 28, 39 to 41, and also Appendix F). The Recovery Plan recognizes that some flycatcher populations are heavily impacted by cowbird parasitism and advocates control in these cases. But the Plan also advocates an adaptive management approach in order to avoid a one size fits all strategy that dictates inflexible policies to managers and potentially waste recovery funds and efforts that would be more efficacious if directed to other actions. The text in Section II. has been modified to more clearly explain that cowbird parasitism is a potential impediment to recovery, and depending on many factors, the effects of parasitism to the overall population can (but not always) be slight.

Issue #8

Comment: What is the basis for the statement that cowbird parasitism rates of 20 to 30 percent have barely detectable levels on host recruitment (presumably of flycatchers)? How would it be possible that flycatchers would be unaffected (from recruitment and fitness standpoints) if they produced no or reduced numbers of young from up to 30 percent of all nests?

Response: As summarized in Appendix F in the subsection titled “Host Defenses Against Cowbird Parasitism”, there is a consensus among recent researchers that the traditional practice of assessing avian productivity on a per nest basis is misleading because it inflates the apparent impacts of factors such as brood parasitism and nest predation. Instead, it is now widely accepted that impacts on avian productivity need to be assessed from a per female breeder perspective. Once this is done, it becomes evident that something like a 30% parasitism rate is likely to translate to a 15% or less reduction in host reproductive output due to desertion or depredation of a nest followed by renesting. However, any measurable reduction in nest productivity should not be construed as one that is insignificant or discountable. For further information, please consult the references listed in Appendix F. In terms of fitness effects other than reduced numbers of young, such as effects of parasitism on adult viability, Sedgewick and Iko’s (1999) exceptionally detailed and data rich study found that parasitism had no clear detrimental effects on flycatcher viability, as discussed in Appendix F.

Issue #9

Comment: The statement says that cowbird control should be considered only after impacts exceed certain levels. What are those levels? Given the precarious status of the flycatcher and our incomplete understanding of the means and measures necessary to recover individual populations or the species as a whole, we suggest that there currently is no acceptable level of impacts to the species. In contrast to the recommendations in the draft plan, we contend the available information strongly suggest that the breeding productivity of the species should be maximized wherever possible and not compromised during and after studies that will almost invariably reveal, if cowbirds are present, that brood parasitism by cowbirds has reduced the breeding success of the test population of flycatchers.

Response: Section IV.E., Narrative Outline of Recovery Actions in the Recovery Plan has a detailed explanation of the levels that should trigger consideration of cowbird control efforts for overall recovery of the flycatcher, as does Appendix F. In agreement with the comment, the Recovery Plan argues that maximizing flycatcher breeding success needs to be a major goal, but it also acknowledges the need for adaptive management, which means that actions other than, or in addition to, cowbird control, will often be most effective in achieving recovery. The Recovery

Plan acknowledges that cowbird control is a useful tool because it is a threat that is easily remedied (unlike nest predation and habitat loss). When considering overall recovery of the flycatcher, relative ease of a recovery action should not be the primary reason for taking action.

Issue #10

Comment: The draft Plan recommends that cowbird control should be stopped after a local willow flycatcher population reaches a large size. Please define a large size.

Response: The Recovery Plan has been revised to provide clarification of this issue. The Recovery Plan now states that cowbird control should be discontinued when the flycatcher population has doubled to tripled in size from when cowbird control began, as long as the absolute number of pairs is equal to or exceeding 25 (page F-31). Research (test cases) are needed to determine the extent to which enlarged populations experience significantly reduced rates of parasitism.

Issue #11

Comment: It is the understanding that critical habitat for the flycatcher will be reassessed based on recent court decisions. The critical habitat section should remove opinions on the designation of critical habitat, update the facts surrounding recent court cases, and include the Technical Teams recommendations for critical habitat designation.

Response: The Recovery Plan has been revised in response to this comment. It should be recognized that although the Technical Subgroup has developed a roadmap for recovery by delineating recovery and management units and recognizing important areas within those units for conservation of the species, it is not the Technical Subgroup's responsibility to designate critical habitat.

Issue #12

Comment: On page 43 of the draft Plan, the statement that in recent years, several of the few larger populations have been impacted...by inundation by impounded water (Lake Mead and Lake Isabella) is incomplete and inaccurate. The statement is not supported by any reference to any scientific data. A review of the entire record indicates that any site specific adverse impacts of short duration are counter-balanced by positive impacts of increased riparian acreage and maintenance of existing habitat within the reservoir. The Plan should consider the entire record of data when discussing impacts of routine reservoir operations.

Response: The USFWS recognizes these reservoirs have contained habitat that flycatchers use. In fact, many large populations of flycatchers exist within the water storage space at Lake Isabella, Lake Mead, and Roosevelt Lake. However, dam operations can, have, or will result in reduced suitability and/or complete loss of habitat through inundation or dessication. The broader perspective on dam operations is that dams can alter hydrological regimes and impede transport of sediment, impacting downstream riparian vegetation quality, quantity, and species. This change in vegetation results in conditions that often do not favor development, maintenance, and recycling of native flycatcher habitat (Section II, page 34 and Appendices H and I). Rather, downstream habitat quality is changed to contain more exotic vegetation, which also increases the frequency of fires. Therefore, while dams and the operations of dams can create flycatcher habitat within the area where water is stored, these situations are more vulnerable to inundation and dessication, less persistent, and tend to decrease the amount and quality of available flycatcher habitat downstream. In fact, dams and dam operations can help create the undesirable condition where the only available flycatcher habitat on a stream is contained within the storage space of the reservoir (e.g., Salt River/Roosevelt Lake; however, note that Roosevelt Lake is not the only area where flycatcher habitat can develop within the Roosevelt Management Unit). Although large flycatcher populations do occupy habitat within the storage space of reservoirs, they may not be as numerous or as persistent as those that

occupied miles of pre-dammed rivers with fewer anthropogenic stressors.

Issue #13

Comment: The draft Plan treats dams and reservoirs generically, which results in over generalizations that need to be replaced with specifics or deleted. These generalization imply that if these measures are not carried out, there will not be favorable results for recovery of the flycatcher.

Response: The Recovery Plan does not give dam/reservoir-specific information due to the large number and diversity of dams and reservoirs within the range of the southwestern willow flycatcher. Management for dams will differ according to dam size and structure, flow levels, operating rules, and other considerations. In recognition of the comment, the water-related recovery actions in the Section V., Implementation Schedule, have been revised (actions 1.1.2.1.1–1.1.2.1.9.). Based on the new schedule, location-specific information will be obtained during the next five years. This information will help target dams and reservoir operations that may be modified to benefit flycatcher habitat within the legal and economic constraints under which they operate.

Issue #14

Comment: The statement that dam operating rules should be changed to treat rivers as landscapes and ecosystems should be revised to reflect what is meant. Existing dam operations do treat rivers as landscapes and ecosystems.

Response: The Plan has been revised and Stepdown and Narrative Outline item 1.1.2.1.1. has been described in more detail in response to this comment.

Issue #15

Comment: The Plan discusses major changes to river operations in order to accomplish its goals. There is no discussion of how such changes are to be accomplished within existing laws of the Colorado River and treaties with Mexico. It is not appropriate to include these recommendations in the Plan unless the Service has determined how such changes can be accomplished.

Response: The Recovery Plan has been revised in response to this comment. In order to investigate feasibility of modifying dam operations for the benefit of the flycatcher and its habitat, the Recovery Tasks/Actions, Stepdown and Narrative Outline, and Implementation Schedule have been restructured. The current scheme recommends that the responsible entities investigate and identify those dams and reservoirs where it is legally, economically, and logistically feasible to modify operational changes for the benefit of the flycatcher. Furthermore, those who participate in the Recovery Plan and Recovery Tasks/Actions are never expected, nor required, to violate laws or international treaties. Note that this Recovery Plan is intended to provide guidance for the recovery of the flycatcher, and is not a regulatory document.

Issue #16

Comment: The Plan references the Law of the River regarding the Colorado River. This is the only specific reference in the Plan to the legal framework within which dams are operated. However, even this information is not well integrated into the narrative discussion of dam operations. Further, there is not discussion of the influence of state law, flood control criteria, energy production considerations or surface water rights on the operation of other reservoirs within the Plan area like those located on the Salt and Verde rivers. We suggest that you investigate more fully the specific discretionary authority of the operating entity if you intend to include a description of truly feasible site-specific management actions.

Response: The Recovery Plan has been revised in response to this comment. See response to Issues 13, 14, and 15.

Issue #17

Comment: Because of channelization and channel incisement on the lower Colorado River, even very large releases above downstream demand cannot achieve overbank flooding and inundation of even portions of the historic floodplain. While conceptually, it may be possible to remove/relocate bankline and high levees along discrete portions of the lower Colorado River, the greater challenge is channel incisement due to earlier channelization projects, construction of training structures, banklines and levees. It is physically impossible (short of extremely large flood control releases) to facilitate overbank flooding naturally. It will require significant and costly structural modifications and water diversion in order to wet the floodplain periodically.

Response: The Recovery Plan has been revised to address this issue, see Section IV.E., actions 1.1.2.1.1.-1.1.2.1.9.

Issue #18

Comment: In the draft Plan, modifying dam operations to have spike flows in winter time (page 99, line 7) to benefit flycatcher habitat is in conflict with page 108 section 1.1.3.2.2.2 and recovery of endangered native fish species.

Response: The Recovery Plan has been revised in response to this comment. The draft Plan mistakenly recommended spike flows in the winter, when it should have indicated flows that are consistent with the natural hydrograph.

Issue #19

Comment: The boundary line for southwestern willow flycatcher subspecies bisects the southern portion of the state of California, Nevada, Utah, and Colorado. The boundary represents an integrated area where both species may co-exist. It appears that there is a question as to a definitive boundary for the southwestern willow flycatcher. The draft Plan proposes to impose restrictions on this birds habitat without having scientifically sound data of the actual boundaries.

Response: A precise boundary between subspecies is not currently known, given (a) potential integradation between subspecies, and (b) limited survey effort in much of boundary area. However, the boundaries as drawn in the Plan are based on the best available published and unpublished data (Section II, B). Recent studies have helped refine the northern boundary of the southwestern willow flycatcher's range through the collection of blood from breeding willow flycatchers and subsequent genetic comparison and analysis (Paxton 2000). As a result of this information, two Management Units in Utah and Colorado described in the draft Plan (Dolores and Sevier) were removed from the breeding range of southwestern willow flycatcher. Findings from future research may continue to modify the boundary.

Issue #20

Comment: Identify cut-off dates for historical versus contemporary records. This is crucial to determining, and defending, recovery goals and objectives.

Response: The Plan has been revised to now explain that "contemporary investigations" of flycatcher territories in Arizona are post-1990 (Section II, page 8). Note that recovery goals for the southwestern willow flycatcher are not dependent on historical records, historical abundance of

habitat, or historical populations. Rather, they are based upon the current potential of habitat, and an abundance and distribution that assures long-term persistence throughout its range. In other words, the recovery goals are not established to maximize the number of birds or achieve historical pre-European settlement population levels.

Issue #21

Comment: A recommendation on page 109 in the draft Plan states that tamarisk in occupied flycatcher habitat not be removed. However, tamarisk is an exotic species. Tom Dudley, University of California, indicated in a personal conversation that tamarisk habitat as producing 0.82 fledgling per nest and therefore was not producing a sustaining population. It would seem the position of managing tamarisk should be rethought to allow removal of the tamarisk and replace it with the more productive native willows and cottonwood vegetation where the water regime permits such conversion.

Response: The Recovery Plan discusses exotic vegetation management in Section IV.E., actions 1.1.2.2 and 1.1.3.2, and also in Appendix H. The Recovery Plan describes methods and conditions for removal of tamarisk and restoration of native vegetation. Specifically, item 1.1.3.2 discusses and recommends use of native plants for revegetation, developing exotic vegetation management plans, and most importantly, advocates reducing the conditions that allow exotic plants to thrive.

The Plan is very explicit by recommending against removal of tamarisk if underlying factors are not understood and management across landscapes is not coordinated, as the probability that re-establishment of exotic plants will occur is high. The Plan describes the fact that flycatchers can and often do nest successfully in tamarisk (Section II, page 13 and14) and recommends that tamarisk be retained in areas where flycatchers are breeding (Section IV.E., action 1.1.3.2.5.1., page 119).

There are as yet, no firm data that southwestern willow flycatchers nesting in tamarisk produce less young than those in native habitats, or that populations breeding in tamarisk are less self-sustaining than those in natives (Section II, pages 11-15). Sferra et al. (2000) compiled the nesting success of 84% of the 2008 nests documented primarily between 1993 and 1999, and some from 2000. Nest productivity in tamarisk-dominated sites is 23% to 54%, which is similar to native willow-dominated sites. Tamarisk nest success averaged 45% in New Mexico and 54% in Arizona, indicating that tamarisk nests are at least as successful as nests in other substrates. Therefore, until such data are available, the Plan's approach to tamarisk/saltcedar removal is reasonable.

Issue #22

Comment: What is the definition of potential and occupied flycatcher habitat and the difference between potential and suitable willow flycatcher habitat?

Response: The Recovery Plan has been revised to clarify the definitions, differences, and importance of these stages of flycatcher habitat to its survival and recovery in Section II, pages 15 to 19 and Appendix D, Southwestern Willow Flycatcher Habitat.

Issue #23

Comment: Little emphasis is placed on suitable and potential, restorable and/or recovering southwestern willow flycatcher habitat. Also, little emphasis is placed on tributaries or drainages outside the rivers main stem. The document is almost entirely focused on existing occupied flycatcher habitat and makes little or no effort to deal with managing other areas for recovery of the species.

Response: The primary recovery task is to increase and improve currently suitable and potentially suitable habitat (Stepdown and Narrative Outline item 1, page 96 and 106). Every item underneath this

heading is directed toward protecting, enhancing, restoring, managing, and cooperating in the management of these habitats.

A section to the Recovery Plan was added on describing the importance of unoccupied suitable habitat and potentially suitable habitat (Section II, page 17). Here, the Plan describes that these different stages of flycatcher habitat are essential for flycatcher survival and recovery because flycatcher habitat is dynamic and ephemeral in nature. As a result, all flycatcher breeding habitat begins as potential habitat, grows into suitability, and then becomes occupied by nesting flycatchers.

Additionally, as directed by the Endangered Species Act, the purpose of this Plan is to conserve the ecosystems upon which the southwestern willow flycatcher depends. The flycatcher depends upon one of the most critically endangered habitats in North America: southwestern riparian ecosystems. As a result, this Plan takes an Ecosystem and Watershed Approach to flycatcher recovery (Section I, page 2).

The Plan discusses that the health of riparian ecosystems and development, maintenance, and regeneration of flycatcher nesting habitat depends on appropriate management of uplands, headwaters, and tributaries, as well as the main stem of river reaches. All of these landscape components are inter-related. As a result, nesting habitat is only a small portion of the larger landscape that needs to be considered when developing management plans, recovery actions, biological assessments for section 7 consultations with the USFWS, or other documents defining management areas or goals for flycatcher recovery (Section II, page 16). Also note that discussion and separate guidance is developed for upland grazing in Appendix G.

Issue #24

Comment: The definition of potential southwestern willow flycatcher habitat used in the draft recovery plan may be too broad to be practical. Using this definition, almost all riparian areas would be considered potential habitat. We suggest using the definition from the Forest Service Region 3 Grazing Criteria, August 1998, page 50, as something more useful [see comments for full definition]. Further discussion of potential habitat on page 16 of the draft recovery plan would dovetail with this definition. The Forest Service definition should be reworded to make it more palatable, definable, and useable for the biologists.

Response: The Recovery Plan has been revised to clarify the definition of potential habitat, and while the description is not identical to that of the National Forests in the Southwest, it retains a similar concept (Section II, pages 15 to 19 and Appendix D, Southwestern Willow Flycatcher Habitat).

Issue #25

Comment: Nesting habitat size requirements must be defined in more specific terms. There seems to be a definite width and length combination providing the seclusion, security, and territory protection needed for successfully breeding flycatchers. Mojave County states that “many biologists in the Grand Canyon National Park no longer classify the long narrow strips of riverbank vegetation as nesting habitat although an occasional nest will be found there” but that BLM wildlife biologists “identify willow strip vegetation along a dry wash as nesting habitat.” BLM’s decision has serious ramifications upon surrounding land management with the restrictive practices required.

Response: The Plan has been revised to respond to this comment (Section II., page 17, Patch Size and Shape, Section II., page 80 and 81, and Appendix D). The riparian patches used by breeding flycatchers vary in size and shape. They may be relatively dense, linear, contiguous stands or irregularly-shaped mosaics of dense vegetation with open areas. Southwestern willow flycatchers nest in patches as small as 0.1 ha (0.25 ac) along the Rio Grande, and as large as 70 (175 ac) in the upper Gila River in New Mexico. Based upon patch size values given in publications and agency

reports, mean size of flycatcher breeding sites supporting 10 or more flycatcher territories is 24.9 ha (61.5 ac) (SE =5.7 ha; range =1.4 to 72 ha; 95% confidence interval for mean=12.9 to 37.1; n= 17 patches).

Issue #26

Comment: The position on saltcedar removal needs to be perfectly clear to managers. Removing it, even when it may not be appropriate, is still the prevalent action in S. Nevada among land managers.

Response: The plan has been revised in response to this comment. Recovery tasks listed under Stepdown and Narrative Outline item 1.1.3.2 provides explicit direction for managing and/or removing saltcedar and other types of exotic vegetation. Appendix H discusses the current understanding of exotics in riparian areas specific to the flycatcher. Condition B (page H-19) presents pertinent assessment questions, actions, and case studies to be used by managers. In addition, the Service acknowledges that there may be reasons unrelated to the flycatcher for removing exotics.

Stepdown and Narrative Outline item 1.1.3.2.5.1 is clear in its recommendation to not remove tamarisk in occupied flycatcher habitat and where appropriate, in suitable but unoccupied habitat. Item 1.1.3.2.6 recommends only removing suitable exotic vegetation if: 1) underlying causes for dominance of exotics have been addressed; 2) there is evidence that the exotic species will be replaced be vegetation of higher functional value; and 3) the action is part of an overall restoration plan.

Issue #27

Comment: If parasitism rates of 20-30% have barely detectable effects, how does it make a difference if it is exceeded in more than one year? What rates are needed to create a detectable effect on the species? And how are these rates derived? More study is definitely needed in this area before a true trapping program is developed.

Response: Despite the lack of evidence for increases in flycatcher breeding populations after cowbird trapping, there are cogent reasons to continue this management approach because 1) control does increase the numbers of flycatchers being produced and these increased numbers may result in emigrants to other populations; 2) one can not invalidate the hypothesis that populations that have not increased after cowbird control would have been extirpated without control; 3) whether cowbird control increases local flycatcher populations may vary geographically so it is worth continuing the program to fully assess the efficacy of this approach. The 20-30% range reflects the best judgement of the technical team members familiar with passerine breeding biology. Because many flycatcher populations are small and subject to stochasticity, even moderate rates of parasitism such as 30% could have large effects, by for example, affecting all individuals, within a population that are left unaffected by other threats such as nest predation. Therefore, such rates could lead to local extirpations and affect, metapopulation dynamics. The presentation of the 20-30% range is followed by an extensive discussion of additional factors that managers and regulators should read. This discussion stresses that each site needs to be treated individually and explicit wording to that effect has been added.

Issue #28

Comment: There is inherent conflict between the current state of riparian areas and the proposed management of exotic species. Many riparian areas are populated by thick stands of tamarisk. The Service, in previous publications, has called for removal of tamarisk, but now, because the flycatcher uses it, implies that some plants should not be removed. There is no clear directive and land managers are hard pressed to know what to do.

Response: The USFWS supports restoration of riparian areas to native vegetation (see section IV.E; action 1.1.3.2.3.). In the particular case of the flycatcher, a species that uses tamarisk for breeding habitat, consideration of where and how restoration occurs is needed. As a consequence, this Recovery Plan calls for a coordinated, temporally-staged approach to removal of tamarisk (see section IV.E.; action 1.1.3.2.6.). The endangered status of the flycatcher necessitates maintaining current structure of occupied breeding habitats and suitable unoccupied habitats, regardless of species composition (see section IV.E.; action 1.1.3.2.5.).

Issue #29

Comment: The Recovery Plan needs to better address the overall perception by the general public that tamarisk is good for the flycatcher and be upfront in explaining this dilemma to agencies and the general public.

Response: The Recovery Plan has been adapted in response to this comment (refer to expanded discussion in Section II.C., page 13, *Habitats Dominated by Exotic Plants*, and Section II.J., page 33, ***Reasons for Listing and Current Threats***).

Issue #30

Comment: The Habitat Restoration Appendix describes 5 mitigation goals. Numbers 3 through 5 (remove exotics and restore natives, restore a more natural flood regime, and attaining a self sustaining ecosystem) may be appropriate for a white paper, but turning suggested guidelines and goals into explicit recovery tasks for the flycatcher is not authorized under the ESA.

Response: This Recovery Plan is intended to provide guidance for the recovery of the flycatcher, and is not a regulatory document. The mitigation goals listed in the Habitat Restoration Appendix are intended to guide mitigation projects that involve the flycatcher. Numbers 3-5 are based on the current understanding of significant threats to the species, and are significant issues that are addressed throughout the plan.

Issue #31

Comment: The fundamental and pervasive defect of the Plan is the failure to distinguish between species recovery as properly within the scope of section 4 (f), and maximum ecosystem protection, a goal of section 2 but not the focus of recovery plans. By asserting that the purpose of the Plan is to conserve flycatcher ecosystems, rather than the species itself, the Service concedes the legal deficiency of the document and reveals the fundamental reasons that the measures it calls for are too broad and burdensome and outside the scope of ESA.

Response: Conserving flycatcher ecosystems to the extent that the southwestern willow flycatcher is considered recovered may or may not result in maximum ecosystem protection. The Recovery Plan has been revised in response to this comment to further clarify the focus on riparian systems relevant to the southwestern willow flycatcher (see Section I.B).

Issue #32

Comment: Will 40 percent use by cattle of current years growth ever allow a willow to attain a height great enough for quality flycatcher habitat?

Response: As Appendix G discusses at length the fact that percent utilization of woody vegetation has important consequences for flycatcher habitat quality. Although some willow species may be able to survive with high utilization rates (Lammon 1994/pg. G-7), this does not ensure that woody

vegetation is able to attain a structure that is suitable for flycatchers. With appropriate monitoring, as called for in the grazing guidance detailed in Section IV.E., actions 1.1.3.1.1.1.-1.1.3.1.1.4., and 6.4.1., and in Appendix G, Table 2 and page G-28, woody vegetation utilization should not approach, let alone exceed, 40% percent, because livestock would be moved when herbaceous utilization reached 35%. The 40% woody vegetation utilization figure is based on the best science currently available – but this may change in the future as this level is evaluated based on monitoring.

Issue #33

Comment: The Plan states there should be no livestock grazing in occupied flycatcher habitat until research in comparable unoccupied habitats demonstrates no adverse impacts from grazing. Sufficient information exists to identify acceptable use levels in most, if not all, currently-grazed areas such that flycatcher needs can be met while not entirely disrupting the grazing industry. Moreover, where research into impacts of grazing is needed, the grazing pressure in the experimental area should be managed to yield results that will be useful in structuring acceptable use levels on the control site. The text as written provides no such guidance.

Response: The Recovery Plan allows for conservative grazing in the non-growing season in occupied habitats, as long as average utilization does not exceed 35% of palatable, perennial grasses and grass-like plants in uplands and riparian habitats, the extent of alterable stream banks showing damage from livestock use do not exceed 10%, and woody utilization does not exceed 40% on average (Appendix G, Table 2, page G-27). The Recovery Plan supports documentation of grazing practices and further research on grazing schemes (Section IV.E., actions 1.1.3.1.1.2–1.1.3.1.1.4., and 6.4, and Appendix G, page G-23), and advocates an adaptive management approach. The Recovery Plan will be revised with new information on compatible grazing schemes as it becomes available, assuming the additional data and analyses exist in 5 years.

Issue #34

Comment: The Plan is inadequate because the Service did not meet the statutory requirements of Congress nor the regulatory requirements of the Agency, due to not basing the plan on adequately sound data on grazing. The Plan admits that information linking management of livestock grazing effects to the flycatcher remain to be researched. The Plan also goes against statute, by elevating single use over multiple use, which is required by statute.

Response:

The Recovery Plan is based upon the best available science and information. The Recovery Plan emphasizes multiple use, as it includes recommendations for a variety of activities, including grazing, recreation, and water use. The Plan is based on the best available data on grazing (see Appendix G). The Recovery Plan allows for conservative grazing, and acknowledges the need for flexibility interpreting the grazing guidelines based on location-specific conditions. If a particular grazing system coincides with improved southwestern willow flycatcher habitat (e.g., the grazing system is not preventing regeneration of woody and herbaceous riparian vegetation), then that particular grazing system should be allowed to continue provided it is appropriately monitored and documented (Appendix G, page G-25). Additionally, the Plan recommends studies on grazing so that information can be gained and used to assess the compatibility of grazing with flycatcher recovery. Also see previous response.

Issue #35

Comment: The livestock grazing discussion and management would benefit from the addition, development,

and implementation of watershed wide management plans. Poor conditions on the adjacent and upstream uplands could exacerbate catastrophic floods and wipe out local gains in riparian habitat recovery.

Response: The Recovery Plan has been revised in response to this comment to incorporate upland areas in the grazing recommendations given in Appendix G, Table 2. The Recovery Plan does not preclude Management Units from working together to craft watershed-scale management plans.

Issue #36

Comment: After much discussion in the issue paper and the beginning of this document, why are upland conditions ignored? Upland conditions and utilization by livestock should have guidelines similar to riparian areas. The proposed utilization standards for occupied habitat seem more appropriate for upland areas than for riparian areas.

Response: The plan has been revised in response to this comment. Upland conditions have been incorporated into the grazing guidelines given in Appendix G, Table 2, as well as in the text of Section IV.E., Narrative Outline of Recovery Actions. Beyond conservative grazing, sufficient scientific information on upland habitat does not exist from which to develop more specific guidelines relevant to flycatchers. Due to the significant variability in upland habitats, guidelines are difficult to recommend and will need to be assessed on a site by site basis.

Issue #37

Comment: Average utilization levels of 35% on herbaceous vegetation and 40% on woody vegetation is not conservative grazing, particularly when dealing with listed species habitat and recovery. Instead, it may rank as moderate to high levels based on the type of vegetation present. If you are grazing in the dormant season, there should be almost no use on woody vegetation; 40% use during the dormant season would seem to represent unexpectedly high use during the nongrowing season. Grazing at these levels are likely to significantly alter overall cover density at lower levels of the canopy.

Response: Available science supports the grazing guidelines given in the Recovery Plan as "conservative" over the variety of riparian systems across the range of flycatcher habitat. Wetter and drier areas will be differentially impacted by grazing. One area (i.e., Tonto National Forest) cannot be the basis for all guidelines. However, data from the Tonto has been assessed and is discussed in Appendix G, and the plan calls for new science/research to further our knowledge base. In addition, the Recovery Plan also recommends vegetation/habitat monitoring. Areas of poor habitat quality (= low forage availability) should not be grazed (Appendix G, pages 23, 28). If 35% utilization of herbaceous vegetation is reached, livestock should be removed from the area and the 40% woody utilization level will likely not be attained. The guidelines will be revised if new information suggests that this strategy is in error. Other relevant changes to the Recovery Plan include establishing maximum bank alteration levels, and clarification of "dormant" season (see Appendix G).

Issue #38

Comment: Livestock use in the riparian areas at the recommended levels, even in dormant season, can affect understory density of vegetation. Allowing these levels in warm, dry winters, will cause extremely high use and are likely to result in bank damage (stream channel alteration) and expose channels to alteration or loss during the peak spring runoff season. More conservative use levels are needed and bank alteration limits should also be established.

Response: The Recovery Plan has been revised in response to this comment. The USFWS reviewed

additional data and the published literature on range management and incorporated a threshold for stream bank condition into the grazing guidelines (Fleming et al. 2001; see Appendix G, Table 2).

Issue #39

Comment: What constitutes the dormant season (leaf drop to bud break)? Dormant season means a lot of things to a lot of people.

Response: Definitions of growing season and non-growing season have been added to Appendix G, Table 2 (page G-27). Growing season is defined as bud break to leaf drop for cottonwood and willow species. The non-growing (i.e., dormant) season is defined as leaf drop to bud break for cottonwood and willow species.

Issue #40

Comment: Standards for stubble height should be an option for measuring riparian use. Determining percent use is often difficult for various riparian grasses/grass-like plants because of variability in plant height, site productivity and other factors.

Response: The plan has been revised to discuss stubble height for measuring riparian use (Appendix G). Unfortunately, sufficient available science in riparian areas of flycatcher habitat does not exist upon which to base stubble height recommendations in this Recovery Plan. What we do know is that Mosley et al. (1997) suggested the following guidelines for stubble heights in riparian systems in Idaho: 1) stubble height of 3 to 4 inches for sedges, tufted hairgrass, and similar species following the growing season; 2) two inches for Kentucky bluegrass; 3) four to 6 inches for large bunchgrasses; and 4) utilization of riparian shrubs should not exceed 50 to 60% during the growing season. However, some researchers caution against recommendations that call for a uniform level of utilization or stubble height to maintain riparian attributes because these recommendations ignore the inherent complexity of riparian systems (Green and Kauffman 1995).

Issue #41

Comment: The use of the word habitat appears in several different forms. Mixing the different definitions leads to confusion. Consistent definitions of habitat are important since downlisting criteria calls for protection of double the amount of habitat required to support the target number of flycatchers. Until the term habitat is scientifically defined and consistently used, it will be impossible to implement the Plan.

Response: The Recovery Plan has been revised in response to this comment to clarify the definitions of habitat used in the plan (see Section II.C.). Habitat requirements/characteristics are discussed in Section II.C., Habitat Characteristics. The Recovery Plan States (page 11): "...general unifying characteristics of flycatcher habitat can be identified. Regardless of the plant species composition or height, occupied sites usually consist of dense vegetation in the patch interior, or an aggregate of dense patches interspersed with openings. In most cases this dense vegetation occurs within the first 3-4 m (10-13 ft) above ground. These dense patches are often interspersed with small openings, open water, or shorter/sparser vegetation, creating a mosaic that is not uniformly dense. In almost all cases, slow-moving or still surface water and /or saturated soil is present at or near breeding sites during wet or non-drought years."

Issue #42

Comment: Agricultural lands with suitable flycatcher habitat and future potential habitat are somewhat overlooked in the Recovery Plan. In southern Nevada, irrigation practices are many times

conducive to creating habitats for flycatchers and this resource has been undervalued. The document needs to better assess the value of agricultural lands as breeding flycatcher habitat and relate this to the overall recovery of the flycatcher. Agricultural lands operated for their traditional uses under certain constraints may provide significant benefits to adjacent flycatcher habitats as well.

Response: See section IV.E.; action 1.1.2.2.1.

Issue #43

Comment: The Recovery Plan needs to emphasize opportunities for creation of additional breeding habitat over a short period of time. For example, there are willow habitats in Nevada which have recently become established over a 5 year period and have successful nesting flycatchers within that 5 year period. The ability of southwestern river systems to provide a matrix of individually small and short-lived habitat patches which contribute to a larger habitat complex that has both connectivity and appropriate overall structural availability should not be overlooked.

Response: The Recovery Plan (pg. 17) recognizes that potential habitats that are not currently suitable will be essential for flycatcher recovery, because they are the areas from which new suitable habitat develops as existing suitable sites are lost or degraded; in a dynamic riparian system, all suitable habitat starts as potential habitat. Furthermore, potential habitats are the areas where changes in management practices are most likely to create suitable habitat. Not only must suitable habitat always be present for long-term survival of the flycatcher, but additional acreage of suitable habitat must develop to achieve full recovery. See also Section IV.A.; page 75.

Issue #44

Comment: The Recovery Team should consider using existing technology and information to develop a habitat-predictor model for the range of the flycatcher to estimate the amount of current available habitat, help direct survey efforts, and possibly identify areas needing habitat rehabilitation. A model of this type had been developed by the Mexican spotted owl Recovery Team and GIS experts, as has undergone field-testing and several revisions.

Response: Basic research to identify and predict flycatcher habitat at a variety of spatial and ecological scales, using standard vegetative measurement techniques as well as remote sensing and GIS, is recommended in the Recovery Plan. Such projects have been initiated by the AGFD, which developed and successively tested a predictive model for flycatcher breeding territory at low-elevation reservoir inflows in Arizona. The next step is to adapt the AGFD modeling approach to other parts of the flycatcher's range, recognizing that the variability in flycatcher breeding habitats (e.g., native and exotic vegetation; differing plant species; low and high elevation; large and small patches) may require a series of related but somewhat differing habitat models. The Recovery Plan supports and encourages the continuation and expansion of such habitat modeling efforts, as part of the tasks described in Section IV.E.; actions 6.1.1. and 6.1.2.

Issue #45

Comment: The minimum list of responsible entities shown in the Implementation Schedule has no reasonable basis. The assignment of specific tasks that have not agreed to undertake those tasks and have no responsibility to do so is a clear indication that the Plan is arbitrary and capricious and should not be used unless binding agreements exist. The minimum list of responsible entities includes entities who have made no commitments to perform or fund any of the tasks contemplated by the draft plan. The ESA does not authorize the Service to use Recovery Plans to enlist non-federal parties to a species recovery program. Recovery is the responsibility of the federal government, not stakeholders.

Response: Recovery tasks were developed by the Recovery Team with input from stakeholders, including Federal and State agencies, industry groups, conservation organizations, academic institutions, and others. As recovery plans are not regulatory documents, parties on the "Minimum List of Potential Partners"in Section V., Implementation Schedule, are not committed by law to undertake recommended recovery actions. These partners are identified due to their potential to implement recovery actions, if they so choose. Federal agencies do have general responsibilities to listed species.

Issue #46

Comment: Unless recovery actions are made site-specific it is highly questionable that many of the actions listed, such as modify dam operating rules should be given a priority 1 status. Priority 1's are those that MUST be taken to prevent extinction or to prevent the species from declining irreversibly in the foreseeable future. Any priority 1 must be justified in the narrative outline as necessary to prevent extinction. As currently written, most of the tasks in 1.1.2 and 1.1.3 are not justified.

Response: The Recovery Plan has been revised to allow managers to identify site-specific opportunities (see Section IV.E.; 1.2.1.1.-- 1.1.2.1.9.); priority numbers have also been revised (see Section V., Implementation Schedule).

Issue #47

Comment: The 3:1 ratio of acquired habitat to lost habitat needs some additional supporting rationale that agencies/groups can use.

Response: See response to following comment.

Issue #48

Comment: The Plan indicates that potential habitat should be replaced at a 3:1 ratio. Potential habitat is neither occupied nor suitable for use by flycatchers because it lacks in some critical component. This is not habitat. We do not believe the Service has the authority to regulate potential habitat.

Response: Recovery plans are non-regulatory documents; therefore the USFWS is not regulating potential habitat for the southwestern willow flycatcher with the Recovery Plan. The discussion of potential habitat and its importance to the flycatcher has been expanded within the Recovery Plan (see section II.C.2.; page 15). Regarding the suggested habitat replacement ratio, refer to the expanded discussion under "Measures to Minimize Take and Offset Impacts" on page 83.

Issue #49

Comment: Research and removal of exotic species should be maintained as items that should be used to offset the loss of flycatcher habitat.

Response: Research and removal of exotic species are potentially significant recovery actions (see Section IV.E.; 1.1.3.2.6., and 6.1-6.12.3.), but do not compensate for loss of habitat. As the Recovery Plan states (see Section II.J.; page 33), loss and modification of habitat is one of the primary causes for the endangered status of the southwestern willow flycatcher.

Issue #50

Comment: Habitat should be replaced or permanently protected within the same Management Unit. Allowing replacement or protection of habitat that cannot be used by the affected population will lead to a decline of that metapopulation.

Response: The USFWS agrees that habitat should be replaced or permanently protected within the same Management Unit (see Section IV.B.; page 83); however, to increase flexibility in plan implementation, the downlisting criteria allow for small departures within Management Units (see Section IV.B.; page 78-79).

Issue #51

Comment: The Service should ensure that the Plan includes a description of the actual factors which led to the flycatcher being listed as endangered, as described in section 4(a)(1) of the ESA. The objective measurable criteria in a recovery plan are intended to establish goals which, when met, address each of the factors which led to the listing and can lead to the de-listing of the species.

Response: The plan has been revised in response to this comment. See Section II.J.; page 33, "Reasons for Listing and Current Threats", and also Section IV.F.; page 138, "Minimization of Threats to the Southwestern Willow Flycatcher Through Implementation of Recovery Actions".

Issue #52

Comment: In some cases, the discussion of recovery of riparian habitats, found in the appendices, has been substituted for flycatcher recovery. The Plan correctly states the purpose is to conserve the ecosystems on which flycatchers depend. However, the purpose appears to have been modified to that of conserving riparian habitat in the Southwest regardless of the probability of benefitting flycatchers. On page 2 of the Plan it is stated, the Plan ..seeks in part to protect, re-establish, mimic, and/or mitigate for the loss of natural processes that establish, maintain, and recycle riparian ecosystems. In many cases this goal may be necessary for recovery, but it is highly questionable that this should be a goal in itself.

Response: The purpose of the Recovery Plan is to recommend actions that can be implemented in riparian habitats relevant to the flycatcher. The Recovery Plan has been revised to clarify this intent (see Section I.B; page 2).

Issue # 53

Comment: The Population Viability Analysis (PVA) is speculative and should be deleted. Caveats in the PVA itself indicate that it should not be used to determine number of territories per site for target goals, or other such statements. If the PVA is to be included, then full disclosure of its faults at the beginning of the PVA section is necessary, and followed throughout. Also, replace the summary of the PVA in the appendices with the author=s actual literature so that other people can interpret the results for themselves.

Response: The Recovery Plan has been revised in response to this comment (see Section IV.A.4.; page 73). The Recovery Plan explicitly recognizes that the demographic analysis might not be applicable across the entire range of the flycatcher. The incidence function analysis, based on data from 143 sites, was helpful in formulating the Recovery Plan's strategy (e.g., reclassification and delisting criteria) for achieving a population level and an amount and distribution of habitat sufficient to provide for the long-term persistence of metapopulations.

Issue #54

Comment: An appropriate Plan addresses each of the factors that served as the basis for listing and discusses 1) site-specific management and 2) objective and measurable criteria under which the species can be removed from protection of the ESA. The Plan fails to satisfy these items.

Response: Section II.J.; page 33 addresses each of the factors that served as the basis for listing. This Recovery Plan provides a strategy to characterize flycatcher populations, structure recovery goals, and facilitate effective recovery actions that should closely parallel the physical, biological, and logistical realities on the ground. Recommendations for specific sites where recovery actions should be focused is provided in Section IV., Table 10. The down- and delisting criteria provided in the Recovery Plan are both objective and measurable, and provide for a population level and an amount and distribution of habitat sufficient to provide for the long-term persistence of metapopulations. Flexibility provided by the downlisting criteria is intended to allow local managers opportunities to apply their knowledge to meet goals, possibly in areas the USFWS cannot identify or may not foresee.

Issue #55

Comment: Values for existing number of territories were based on survey data for all breeding sites known to have been occupied for at least one year between 1993 and 1999. Why is it not also the criteria for determining the number of territories for reclassification; occupancy at least once over a five year period?

Response: The Recovery Plan has been updated to include 2000 and 2001 survey data. Values for current number of known territories are based on the most recent available survey data for all breeding sites known to be occupied for at least one year between 1993 and 2001 (see Section IV., Table 9). The recovery strategy outlined in Section IV.A. and B. builds on this number of territories to attain a population level and an amount and distribution of habitat sufficient to provide for the long-term persistence of metapopulations. An effective monitoring protocol has yet to be developed for determining when down- and delisting criteria have been met. We do not yet know how and to what extent populations fluctuate, or how often monitoring must take place to satisfactorily estimate population size. This is one reason the USFWS intends to amend the Recovery Plan in 5 years, and proposes recovery action 6.7.4. “Develop methodologies, which can be site-specific if necessary, for determining year-to-year trends in population sizes at breeding sites”.

Issue #56

Comment: Using cumulative total for estimate of known territories overestimates the number of known territories. It needs to be made clear that recovery goals are not based on cumulative totals.

Response: The estimates for known number of territories and minimum number of territories for reclassification (see Section IV.B., Table 9) are not cumulative estimates. Values for current number of known territories are based on the most recent available survey data for all breeding sites known to be occupied for at least one year between 1993 and 2001.

Issue #57

Comment: The narrative at the top of Table 12 should be restated in the main text of the document and highlighted as a recovery action, i.e. recovery efforts need not focus only on reaches identified. In addition to focusing on occupied habitat, there should be substantial effort to promote the protection of watersheds, such as tributaries to main stems, and to move potential, restorable and/or recovering riparian areas toward suitability.

Response: Table 12 is now Table 10 in the Recovery Plan. Refer to Section II.C.2., pages 15-17, and Section IV.B.2., page 80.

Issue #58

Comment: Additionally, the list of reaches for recovery efforts presented in Table 12 seems woefully incomplete. The table should include rivers or reaches with small populations, existing populations, or no populations. We see no reason why this list should not be as comprehensive as possible.

Response: Table 12 is now Table 10 in the Recovery Plan, and has been revised in response to this comment. Table 10 now includes a more extensive list of suggested reaches.

Issue #59

Comment: It is not clear whether recovery goals include breeding flycatchers on Tribal Lands. The document needs to clarify whether the population targets for down- or delisting include or exclude Tribal lands.

Response: Some Tribes are currently participating with the USFWS in assessing flycatcher numbers on Tribal lands. In these instances, the Tribal information is included in the numbers of existing territories in a Management Unit; continued participation of these Tribes is factored into the numbers needed for reclassification (see Section IV.B.2., Table 9). If additional Tribes choose to participate in the flycatcher recovery effort, data from survey and monitoring efforts will also likely count towards achieving the numeric recovery goals.

Issue #60

Comment: Research shows that flycatchers are much more mobile than previously thought, which is relevant to whether satisfying population goals for Management Units should be a prerequisite to downlist or delist the species. The population goals should be more geographically flexible to take into account greater movement from season to season, while still allowing for genetic diversity rangewide.

Response: The down- and delisting criteria provide sufficient flexibility by allowing an individual Management Unit to meet 80% (criteria set A), or 50% (criteria set B), of its minimum population target, as long as the Recovery Unit attains the overall population goal.

Issue #61

Comment: No specific information in the Plan describes how population goals were set other than using a 25 territory minimum, and feasible management actions. No supporting data or rationale other than according to model results are provided for the 25 territory target or the 15 km distance between sites.

Response: The Recovery Plan has been revised in response to this comment. Refer to Section IV.A.4., page 73.

Issue #62

Comment: Dispersal of flycatchers have been documented in excess of 200 km. The Plan also describes that flycatchers in excess of the minimum required for each management unit are considered potential

colonizers to other units, implying the birds can move from one unit to another and sometimes significant distances. Moving from one unit to another, considering the birds great migration distance, must be considered not only possible, but probable. In light of this new information on flycatcher movements, we question the feasibility of and need for maintaining minimum populations in each unit simultaneously.

Response: See response to Issue #64.

Issue #63

Comment: There has been no demonstration that 3900 individuals are necessary to allow a proper functioning metapopulation. There has been no appropriate discussion on metapopulations or numbers of individuals required to establish each (or any) metapopulation of flycatchers.

Response: See expanded discussion in Section IV.A.4. and IV.A.5.

Issue #64

Comment: The little Colorado River is placed with the Lower Colorado Recovery Unit, while the lower Gila River is situated in the Gila Recovery Unit. Consider switching these streams into different Recovery Units. Although the Little Colorado River does eventually flow into the mainstem Colorado in the Grand Canyon, it is much closer both in distance and in ecology to some of the Gila River Management Units, especially the San Francisco Management Unit. The lower Gila is separated from the rest of the Gila by a long stretch of dry riverbed whereas it's a short distance to its confluence with the mainstem Colorado near Yuma in the Lower Colorado Recovery Unit.

Response: In response to this comment and information provided by the Lower Colorado River Implementation Subgroup, the lower Gila River near its confluence with the Lower Colorado River has been assigned to the Lower Colorado River Recovery Unit (see Section IV.A.1.). No change in the Little Colorado's inclusion in the Lower Colorado River Recovery Unit was made at this time.

Issue #65

Comment: Most if not all of the existing flycatchers and flycatcher habitat is found within the conservation space at Roosevelt. The Team should recognize there is little or no compensation habitat within the Roosevelt Management Unit. Given the lack of available flycatcher habitat, the population goals should be drastically reduced or not be a prerequisite for reclassification or delisting. The Service should specify where and how there is habitat for 40 to 50 pairs in the Roosevelt Management Unit.

Response: Given our current level of understanding, the USFWS believes that a target of 50 territories in the Roosevelt Management Unit is achievable, and necessary to attain a population level and an amount and distribution of habitat sufficient to provide for the long-term persistence of the metapopulation within the Gila Recovery Unit. If this proves to be in error, the USFWS will modify the target, as appropriate, in future revisions of the Recovery Plan. Within the Roosevelt Management Unit, the USFWS believes there is enough potentially suitable habitat outside of the conservation space of Roosevelt Lake to achieve the population target of 50 territories.

Issue #66

Comment: The Roosevelt Management Unit numbers should be increased. There is much more potential for habitat restoration at Roosevelt Lake than the current goal indicates. Even if the lake reached

capacity, there would be enough fringe habitat to contain as many as 50 territories. The current goal does nothing to encourage habitat improvement projects above the lakes new conservation pool. Such suggestions are in line with the Plan's conclusions to maintain existing populations as the highest priority.

Response: The Recovery Plan does not seek to maximize flycatcher numbers in habitats. The strategy used in the Plan calls for increasing population numbers that will serve the metapopulation in that recovery unit. See also response to Issue #69.

Issue #67

Comment: There are concerns that the Plan singles out the Roosevelt Management Unit for additional review of recovery goals in another 5 years. Because the Roosevelt Unit is singled out as a moving target, it creates a climate of uncertainty in the regulated community. We urge this to be removed from the Plan.

Response: The Roosevelt Management Unit was not singled out as a moving target, but rather was assessed, as all Management Units were, for potential habitat that could provide for metapopulation stability and persistence in the future. The USFWS believes there is enough potentially suitable habitat outside of the conservation space of Roosevelt Lake to achieve the population target of 50 territories.

Issue #68

Comment: Camp Pendleton hosts 25% of the flycatcher territories in the San Diego Management Unit. The population's stability is evidence of effective Marine Corps stewardship. On the other hand, the lack of expansion into available habitat on the Base suggests that the population targets for the San Diego Management Unit are not realistic.

Response: The USFWS believes that the amount of potentially suitable habitat within the San Diego Management Unit will support the minimum population target of 125. The known number of territories for this Management Unit is 101 (see Section IV.B., Table 9, page 84).

Issue #69

Comment: The plan fails to acknowledge numerous documented observations and breeding information for willow flycatcher (now being considered southwestern) in the San Luis Valley Management Unit. Recent blood chemistry and DNA work done on birds from the Alamosa National Wildlife Refuge concluded that the birds in the Upper Rio Grande most closely resemble southwestern willow flycatcher and should be treated as such (Paxton 2000). Paxton (2000) presents many locations of the southwestern willow flycatcher in the San Luis Valley Management Unit that have heretofore been discounted or overlooked. The literature search done by Owen and Sogge (1997) for the San Luis Valley Management Unit was inadequate and failed to do a thorough examination of all the existing data in the San Luis Valley Management Unit. There is considerable evidence by numerous observations by amateur and professional birders/biologists that cannot be discounted nor overlooked.

Response: The Recovery Plan references the results of Paxton 2000 (indicating that the San Luis Valley flycatchers show the genetic characteristics of *extimus)* as justification for inclusion of these birds within the range of *extimus*. The current southwestern willow flycatcher population data for the San Luis Valley is not based on Owen and Sogge (1997); rather, it is from Sogge et al. (2002) , which reports current (1993 - 2001) breeding sites as recognized by the USFWS and/or the wildlife agency of the state in which they occur. This is necessary because detections of other species of willow flycatchers (e.g., *E.t. adastus* and *brewsteri*) are common and widely distributed

throughout the southwest as they migrate northward during the early portions of the breeding season. Sogge et al. (2002) coordinated closely with Federal and State wildlife agencies during data compilation efforts in order to avoid erroneously reporting migrant detections as breeding individuals, which would inaccurately inflate abundance estimates for *E.t. extimus*. Furthermore, during 2002, the authors of Sogge et al. (2002) met with amateur and professional biologists in the San Luis Valley to review existing information on the current status and distribution of the flycatcher, and trained over 20 biologists to conduct additional flycatcher surveys in that region; any new information arising from these surveys will be included in future Recovery Plan updates.

Issue #70

Comment: Recovery goals for the flycatcher in the middle Rio Grande are unrealistic because they appear to be inconsistent with current management practices for protection and enhancement of habitat for the silvery minnow, land management agencies are actively engaged in removing exotic saltcedar and Russian Olive to save water for the minnow.

Response: The recovery goals for the flycatcher are consistent with current management for the silvery minnow, as the plan provides for removal of exotics in certain circumstances. Continued coordination between and within agencies is vital.

The most extensive project ever undertaken to investigate water savings by tamarisk removal is the U.S. Geological Survey's multi-year, multi-million dollar project on the Gila River below Safford. The results of that project are the most closely controlled scientific investigation in the literature. The results are available in U.S. Geological Survey Professional Papers 655A through 655J. The project extended over a 10-year period, and included precipitation, groundwater well, surface water discharge, and individual plant data to produce a highly detailed water budget that showed the amount of water saved was within the error envelop of the measurements and no more. The savings of removing tamarisk are lost because of the replacement surface (i.e., a bare surface loses a great deal of water through evaporation, and other plants use high amounts of water as well). The USGS project was designed to address this issue – to conduct a rigid controlled experiment where as many variables as possible could be accounted for.

Issue #71

Comment: The Virgin Management Unit could be managed to increase flycatcher territories to a minimum of 100 territories. The Virgin River flows approximately 80 km from Littlefield, Arizona, to its confluence with Lake Mead. This entire stretch of the Virgin River is an active floodplain that creates and alters habitat on an annual basis. A land or water rights acquisition program could ensure ample in-stream flows to accomplish this goal.

Response: The Recovery Plan has been revised in response to these comments (see Section IV.B., Table 9).

Issue #72

Comment: The Bill Williams Management Unit includes areas below and above Alamo Dam. Current known territories are listed at 25, with the majority of them found above Alamo Dam. Increased survey efforts have found additional pairs below Alamo Dam on the Bill Williams River National Wildlife Refuge. The minimum number of territories listed for reclassification is 75. However, reaching this number will depend on the potential acquisition of Planet Ranch from the City of Scottsdale. If this acquisition goes through, then the minimum territories may increase to 100.

Response: The Recovery Plan has been revised in response to this comment (see Section IV.B., Table 9).

Issue #73

Comment: The Pahranagat Valley has the potential to increase the number of flycatcher territories to a minimum of 50 territories. Past survey efforts were limited to mainly native plant dominated habitat on Pahranagat National Wildlife Refuge. Surveys were not conducted within exotic plant dominated habitats on the refuge and limited surveys were conducted on privately owned parcels within the valley. The opportunity for habitat acquisition is limited within the Pahranagat Valley due to political restraints; however, some opportunity for purchase of conservation easements or habitat restoration on private and state lands does exist. The potential for habitat restoration exists on Pahranagat National Wildlife Refuge.

Response: The Recovery Plan has been revised in response to this comment (see Section IV.B., Table 9).

Issue #74

Comment: The minimum number of territories for reclassification should be adjusted slightly for the Lower Colorado Recovery Unit. Specifically, the Hoover to Parker Management Unit has much less potential habitat (based on floodplain characteristics) than the Parker to Mexico Management Unit. Opportunities for habitat expansion are much more limited geographically in the Hoover to Parker reach than from Parker to Mexico. The Hoover to Parker reach is dominated by canyons that have been flooded to form lakes; the Mohave Valley represents the main opportunity for habitat expansion. Much of the Mohave Valley is within the Havasu National Wildlife Refuge, dominated by Topock Marsh. The Colorado River is heavily channelized through the Mohave Valley and groundwater is deep below the land surface, limiting opportunities for habitat management. Based on the proportions of floodplain in the two reaches, target numbers of territories for reclassification should be redistributed.

Response: The Recovery Plan has been revised in response to this comment (see Section IV.B., Table 9). After careful consideration of information provided by the Lower Colorado River Implementation Subgroup, no changes to the population goal for the Parker to Southerly International Border Management Unit were made at this time. The USFWS believes there is enough potentially suitable habitat within the Management Unit to support the minimum population target.

Issue #75

Comment: If the target 150 territories is met from Parker to Mexico Management Unit, it can only happen through a large-scale land acquisition and restoration program. Several sites within this reach could be used for habitat restoration. The Cibola Valley Irrigation and Drainage District, Palo Verde Irrigation District, and over 2000 acres of BLM administered agricultural leases offer the best opportunities for land acquisition and restoration. The Colorado River Indian Tribes have partnered on riparian restoration projects in the past and may want to be involved in this effort. Cibola NWR and Imperial NWR are located within this reach and the Service should participate in habitat restoration; however, funding opportunities will be limited. It may be possible to meet this ambitious goal but only through large-scale active restoration projects.

Response: The USFWS agrees that the goal is ambitious, but achievable. See also the response to Issue #78 which pertains to this Management Unit.

Issue #76

Comment: Along the Rio Grande in Texas, two management units (Pecos and Texas Rio Grande) have a question mark regarding minimum number of territories for reclassification. Does this mean no territories are expected? If territories are expected, will they be added to the Rio Grande's total, or subtracted from other units?

Response: After further assessment of these two Management Units, the minimum population targets were set at zero (see Section IV.B., Table 9, page 84).

Issue #77

Comment: To meet overall recovery objectives in the Plan, it is not necessary to have viable populations of flycatchers in every Recovery Unit, rangewide. Long-term persistence can be attained by the presence of functioning metapopulations in only some of the Recovery Units. Relaxing the standards for down and de-listing to either a portion of the target population, or preferably, to only a fraction of the Recovery Units would make recovery more achievable without significantly decreasing the probability of long-term persistence.

Response: The plan has been revised to include a criteria set B for downlisting (see Section IV.B., page 78), to provide further flexibility for plan implementation.

Issue #78

Comment: It is not clear whether the Service is requiring that all Management Units meet their respective minimum numbers before reclassification can occur or whether reclassification is being proposed on a unit by unit basis.

Response: Each Recovery Unit must meet its respective minimum population goal, with flexibility provided for Management Units contained therein. Downlisting and delisting will occur when all Recovery Units meet and maintain their population and habitat targets.

Issue #79

Comment: The goal that all management units must achieve and continuously maintain their minimum population goals wrongly assumes that the condition and quantity of flycatcher habitat will remain static over time. Riparian habitats are subject to cyclical and sudden declines and increases. Populations within management units can and are quite likely to vary significantly. Management and development pressures will vary in management units, hydrology of a management unit may impede recovery.

Response: The Recovery Plan takes into account the fact that habitat condition and quality will change over time (see Section II.C.2., page 17, "The Importance of Unoccupied Suitable Habitat and Potentially Suitable Habitat"). Flexibility has been built into the plan to allow for the dynamic nature of riparian habitat (see Section IV.B.).

Issue #80

Comment: The downlisting criteria require achieving 80 percent of the population objectives, and maintaining them for five consecutive years, in all six Recovery Units before downlisting is triggered. Conservation partners vary widely from one unit to another, those in one or more units who failed to act or to achieve success would penalize those in another who aggressively and successfully pursued recovery.

Response: The Recovery Plan has been revised in response to this comment. A second downlisting criterion has been added to increase the implementation flexibility of the plan (see Section IV.B.2.).

Issue #81

Comment: An insufficient case has been made to warrant treating Recovery Units as isolated populations that are separate, unique metapopulations with non-linked objectives. Thus, we believe the Service must offer another objective that would enable downlisting if 80 percent of the overall objective were accomplished in a lesser number of Recovery Units. We believe that achieving 80 percent of the rangewide objective in 3, or perhaps 4, of the units would be an appropriate trigger for downlisting.

Response: The Recovery Plan has been revised in response to this comment. A new downlisting criterion has been developed as a way to increase the flexibility plan implementation (see Section IV.B.2.).

Issue #82

Comment: The concept that de-listing criteria should focus on security of protected and created/restored habitats to accommodate and support target population numbers achieved in downlisting is a good one and represents a valid approach to accomplishing overall recovery. While certain recovery units may present challenges in meeting the projected habitat conservation targets, other units may actually be quite conservative. We would be most supportive of a recovery objective that is population-based (i.e., breeding pair based), when it is demonstrable that the species is clear of jeopardy because enough pairs are breeding to support a healthy metapopulation. We would support that approach more readily than one that unduly focuses on achievement of projected targets in all units before recovery is declarable.

Response: The recovery strategy recommended in the Recovery Plan is population based (i.e., recovery criteria of 1,950 territories) and habitat based (i.e., spatial distribution). The population targets establish a distribution and abundance of flycatchers that minimizes the distance between populations, connects isolated sites to other breeding populations, and increases population sizes to achieve metapopulation stability (see Section IV.A.4., page 73).

Issue #83

Comment: The general criteria for management agreements necessary for delisting are poorly defined, highly subjective, and thus probably impossible to achieve. No definition is provided for the word protected or how much area must be protected. No criteria is provided to indicate which areas are critical to metapopulation stability, or what a network of conservation areas is that would support recovery.

Response: The Recovery Plan has been revised in response to these comments. Examples of management agreements may be found in Section IV.B.2., page 79; Table 10 has been expanded to identify areas where recovery efforts should be focused; and the delisting criteria in Section IV.B.2., pages 81-82, "Removal from the Federal Endangered Species List", provide a measurable context for how much area must be protected for the benefit of breeding flycatchers.

Issue #84

Comment: We are unable to find the scientific justification or rationale for the delisting criterion that the amount of suitable breeding habitat be double that necessary to support the target number of flycatchers within each Management Unit under the criteria for threatened status. Do we know how much habitat this will require in each Management Unit? If so, is it feasible to restore enough habitat to accomplish recovery? If these parameters are not currently known, is it possible to determine how much habitat is necessary to accomplish recovery and how much habitat needs to be created? If the answers to any of the above questions are not known, we recommend that

focused research directed at providing said answers should be a high-priority recovery action. Such research may be a prerequisite for the establishment of realistic recovery criteria.

Response: The Recovery Plan has been revised to address these comments (see Section IV.B.2., page 80). The USFWS believes it is feasible to restore enough habitat to accomplish the recovery goal.

Issue #85

Comment: The recovery objectives and criteria do not even mention the statutory listing factors which must be addressed.

Response: The Recovery Plan has been revised in response to this comment (see Section IV.F., page 138).

Issue #86

Comment: The Plan fails to set forth management actions on a site-specific basis as is required by the ESA. A recovery plan must, to the maximum extent practicable incorporate site specific management actions necessary for the conservation and survival of the flycatcher. The Service already has extensive documentation on operation of dams on the lower Colorado River and Salt River. We believe that each dam and river system is unique in terms of what actions the Service may be able to implement to aid in recovery of the flycatcher. Any proposed modifications to dam operating rules or dam operations should be accurately described and separately identified.

Response: The Recovery Plan has been revised in response to this comment. To obtain information on site-specific management actions that will aid the flycatcher, the plan now calls for the development of feasibility plans for the modification of dam and reservoir operations in flycatcher habitat. These studies will identify site-specific management actions that are legally, economically, and logistically feasible to implement (refer to Section V., page 143, actions 1.1.2.1.1.– 1.1.2.1.9.).

Issue #87

Comment: The Service should include in the Plan suggestions for meaningful Tribal participation offered by the Tribal Working Group in fulfilling the Federal Governments trust responsibility to Indian Tribes as outlined in Secretarial Order 3206.

Response: The Recovery Plan has been revised in response to this comment (see Section IV.E., Narrative Outline for Recovery Actions, actions 1.3.1. – 1.3.6., and Section V., actions 1.3.1.– 1.3.6.).